

**SPHK / SPHK1 Antibody (N-Terminus)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS10625****Specification**

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**SPHK / SPHK1 Antibody (N-Terminus) - Product Information**

Application	IHC
Primary Accession	<a href="#">O9NYA1</a>
Reactivity	Human, Monkey
Host	Rabbit
Clonality	Polyclonal
Calculated MW	43kDa KDa

**SPHK / SPHK1 Antibody (N-Terminus) - Additional Information****Gene ID** 8877**Other Names**

Sphingosine kinase 1, SK 1, SPK 1, 2.7.1.91, SPHK1, SPHK, SPK

**Target/Specificity**

Human SPHK1. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

**Reconstitution & Storage**

Long term: -70°C; Short term: +4°C

**Precautions**

SPHK / SPHK1 Antibody (N-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

**SPHK / SPHK1 Antibody (N-Terminus) - Protein Information****Name** SPHK1 ([HGNC:11240](#))**Function**

Catalyzes the phosphorylation of sphingosine to form sphingosine 1-phosphate (SPP), a lipid mediator with both intra- and extracellular functions. Also acts on D-erythro-sphingosine and to a lesser extent sphinganine, but not other lipids, such as D,L-threo- dihydrosphingosine, N,N-dimethylsphingosine, diacylglycerol, ceramide, or phosphatidylinositol (PubMed:<a href="http://www.uniprot.org/citations/11923095" target="\_blank">11923095</a>, PubMed:<a href="http://www.uniprot.org/citations/20577214" target="\_blank">20577214</a>, PubMed:<a href="http://www.uniprot.org/citations/23602659" target="\_blank">23602659</a>, PubMed:<a href="http://www.uniprot.org/citations/24929359" target="\_blank">24929359</a>, PubMed:<a href="http://www.uniprot.org/citations/29662056" target="\_blank">29662056</a>). In contrast to proapoptotic SPHK2, has a negative effect on intracellular ceramide levels, enhances cell growth and inhibits apoptosis (PubMed:<a href="http://www.uniprot.org/citations/16118219" target="\_blank">16118219</a>). Involved in the regulation of inflammatory response and

neuroinflammation. Via the product sphingosine 1-phosphate, stimulates TRAF2 E3 ubiquitin ligase activity, and promotes activation of NF- kappa-B in response to TNF signaling leading to IL17 secretion (PubMed:<a href="http://www.uniprot.org/citations/20577214" target="\_blank">20577214</a>). In response to TNF and in parallel to NF-kappa-B activation, negatively regulates RANTES induction through p38 MAPK signaling pathway (PubMed:<a href="http://www.uniprot.org/citations/23935096" target="\_blank">23935096</a>). Involved in endocytic membrane trafficking induced by sphingosine, recruited to dilate endosomes, also plays a role on later stages of endosomal maturation and membrane fusion independently of its kinase activity (PubMed:<a href="http://www.uniprot.org/citations/24929359" target="\_blank">24929359</a>, PubMed:<a href="http://www.uniprot.org/citations/28049734" target="\_blank">28049734</a>). In Purkinje cells, seems to be also involved in the regulation of autophagosome-lysosome fusion upon VEGFA (PubMed:<a href="http://www.uniprot.org/citations/25417698" target="\_blank">25417698</a>).

#### Cellular Location

Cytoplasm. Nucleus. Cell membrane. Endosome membrane; Peripheral membrane protein. Membrane, clathrin-coated pit. Synapse {ECO:0000250|UniProtKB:Q8CI15} Note=Translocated from the cytoplasm to the plasma membrane in a CIB1- dependent manner (PubMed:19854831). Binds to membranes containing negatively charged lipids but not neutral lipids (PubMed:24929359) Recruited to endocytic membranes by sphingosine where promotes membrane fusion (By similarity). {ECO:0000250|UniProtKB:Q8CI15, ECO:0000269|PubMed:19854831, ECO:0000269|PubMed:24929359}

#### Tissue Location

Widely expressed with highest levels in adult liver, kidney, heart and skeletal muscle. Expressed in brain cortex (at protein level) (PubMed:29662056).

#### Volume

50 µl

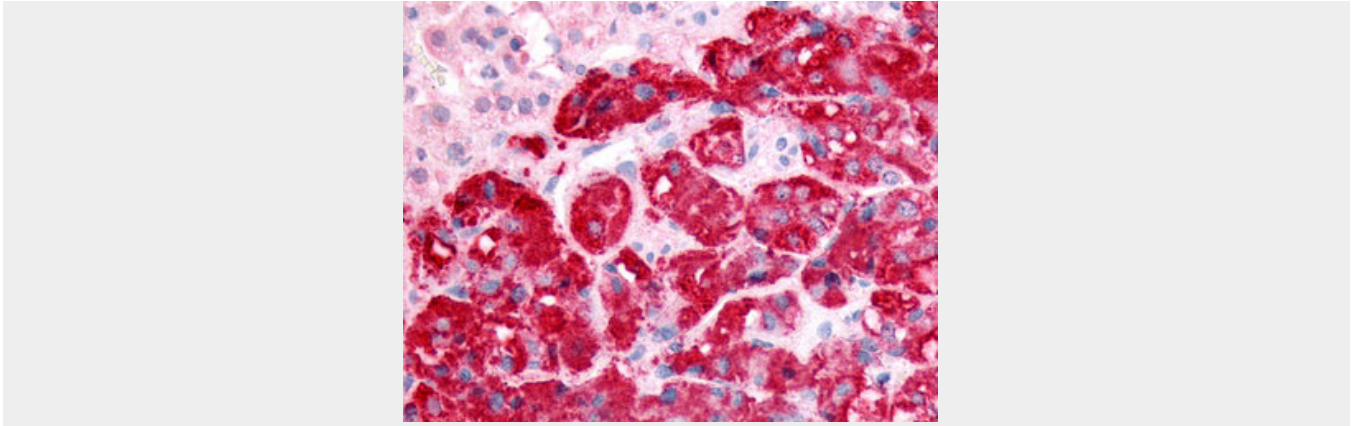
#### SPHK / SPHK1 Antibody (N-Terminus) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### SPHK / SPHK1 Antibody (N-Terminus) - Images





Anti-SPHK1 antibody ALS10625 IHC of human adrenal, pheochromocytes.

### **SPHK / SPHK1 Antibody (N-Terminus) - Background**

Catalyzes the phosphorylation of sphingosine to form sphingosine 1-phosphate (SPP), a lipid mediator with both intra- and extracellular functions. Also acts on D-erythro-sphingosine and to a lesser extent sphinganine, but not other lipids, such as D,L-threo-dihydrosphingosine, N,N-dimethylsphingosine, diacylglycerol, ceramide, or phosphatidylinositol.

### **SPHK / SPHK1 Antibody (N-Terminus) - References**

- Melendez A.J., et al. Gene 251:19-26(2000).
- Nava V.E., et al. FEBS Lett. 473:81-84(2000).
- Pitson S.M., et al. Biochem. J. 350:429-441(2000).
- Van Veldhoven P.P., et al. Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
- Ota T., et al. Nat. Genet. 36:40-45(2004).